

Chapter 6

Write the letter for the correct answer in the blank at the right of each question.

1. There are 15 plums and 9 apples in a fruit bowl. Find the ratio of apples to plums.

A. 3:5 B. 3:8 C. 5:3 D. 8:3

1. A

2. The scale drawing of a porch is 8 inches wide by 12 inches long. If the actual porch is 12 feet wide, find the length of the porch.

A. 8 ft B. 10 ft C. 16 ft D. 18 ft $\frac{8}{12} = \frac{12}{x}$

2. D

3. Solve $\frac{5}{6} = \frac{4}{x}$.

A. 4.6 B. 4.8 C. 5 D. 7

3. B

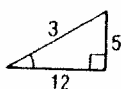
4. A quality control technician checked a sample of 30 bulbs. Two of the bulbs were defective. If the sample was representative, find the number of bulbs expected to be defective in a case of 450.

A. 24 B. 30 C. 36 D. 45

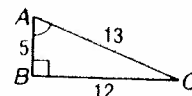
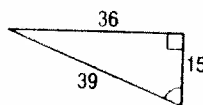
4. B

5. Find the triangle similar to $\triangle ABC$ at the right.

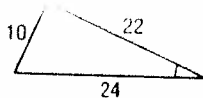
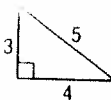
A.



B.

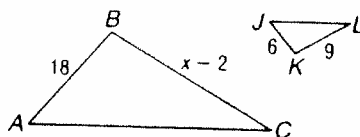
5. B

D.



6. Find x if $\triangle ABC \sim \triangle JKL$.

A. 10 B. 14
C. 25 D. 29

6. D

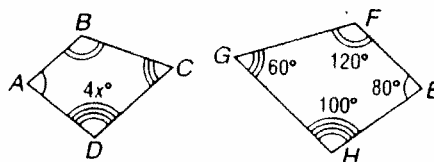
7. Quadrilateral $ABCD \sim$ quadrilateral $PQRS$. If $AB = 10$, $BC = 6$, $PS = 12$, and $QR = 4$, find the scale factor of $ABCD$ to $PQRS$.

A. $\frac{1}{2}$ B. $\frac{3}{2}$ C. $\frac{5}{3}$ D. $\frac{5}{6}$

7. B

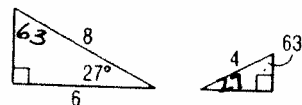
8. If quadrilateral $ABCD \sim$ quadrilateral $EFGH$, find x .

A. 15 B. 20
C. 25 D. 30

8. C

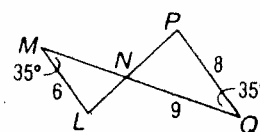
9. Which theorem or postulate can be used to prove that these two triangles are similar?

A. AA B. SAS C. ~~SSA~~ D. SSS

9. A

10. Find MN .

A. $5\frac{1}{3}$ B. $6\frac{3}{4}$ C. 7 D. 12

10. B

Chapter 6 Test

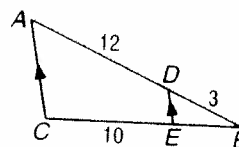
11. A 5-foot tall student cast a 4-foot shadow. If the tree next to her cast a 44-foot shadow, what is the height of the tree?

A. $35\frac{1}{5}$ ft B. 45 ft C. $51\frac{1}{2}$ ft D. 55 ft

11. D

12. In $\triangle ABC$, $\overline{DE} \parallel \overline{AC}$. If $AD = 12$, $BD = 3$, and $CE = 10$, find BE .

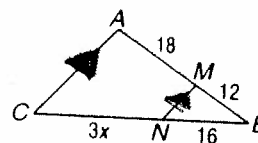
A. 1 B. $1\frac{1}{2}$ C. 2 D. $2\frac{1}{2}$



12. D

13. Find x so that $\overline{AC} \parallel \overline{MN}$ in $\triangle ABC$.

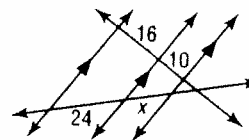
A. 8 B. 10 C. 25 D. 29



13. A

14. Find x .

A. 14 B. 15 C. 16 D. 18



14. B

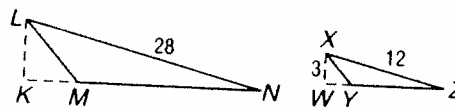
15. If $\triangle FGH \sim \triangle PQR$, $FG = 6$, $PQ = 10$, and the perimeter of $\triangle PQR$ is 35, find the perimeter of $\triangle FGH$.

$\frac{3}{5} = \frac{\text{perimeter of } \triangle FGH}{35}$ A. 21 B. 24 C. 31 D. $58\frac{1}{3}$

15. A

16. $\triangle LMN \sim \triangle XYZ$ with altitudes \overline{KL} and \overline{WX} . Find KL .

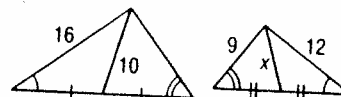
A. 6 B. 7 C. 9 D. 19



16. B

17. Find x .

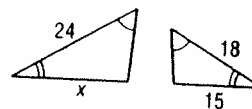
A. 5 B. 6 C. $6\frac{1}{2}$ D. $7\frac{1}{2}$



17. D

18. Find x .

A. 16 B. 18 C. 20 D. 21



18. C